IBM System x3755 M3

IBM Redbooks Product Guide

The IBM® System x3755 M3 is a four-socket AMD Opteron processor-based server that is optimized for outstanding density and cost. It provides flexibility and scalability while offering multiple levels of price/performance. With features such as high performance AMD Opteron 6300 series processors, up to 32 available DIMM sockets with up to 512 GB of memory , and robust I/O, the System x3755 M3 provides four-socket performance at an entry-level price.

The x3755 M3 is an ideal server for business workloads including database, virtualization, Java, and enterprise applications such as ERP. The increased processor density helps reduce networking complexity and cost for high-performance computing environments, and the available 32 TB of internal storage facilitates data-intensive applications like business intelligence.

Figure 1 shows the IBM System x3755 M3.

Figure 1. The IBM System x3755 M3

Did you know?

IBM System x3755 M3 fits into 2U of standard rack space, and it can be used as a very affordable dual-socket 2U rack platform with the ability to grow to four sockets in the same space, or as a very dense space-optimized and price/performance-optimized four-socket enterprise-class server for business critical corporate applications. High availability, manageability, and performance features include Chipkill memory, Memory Sparing, Light Path Diagnostics, Predictive Failure Analysis, TCP Offload Engine (TOE), and integrated baseboard management controller (iBMC) with activated built-in remote presence feature.

Locations of key components and connectors

Figure 2 shows the front of the server.

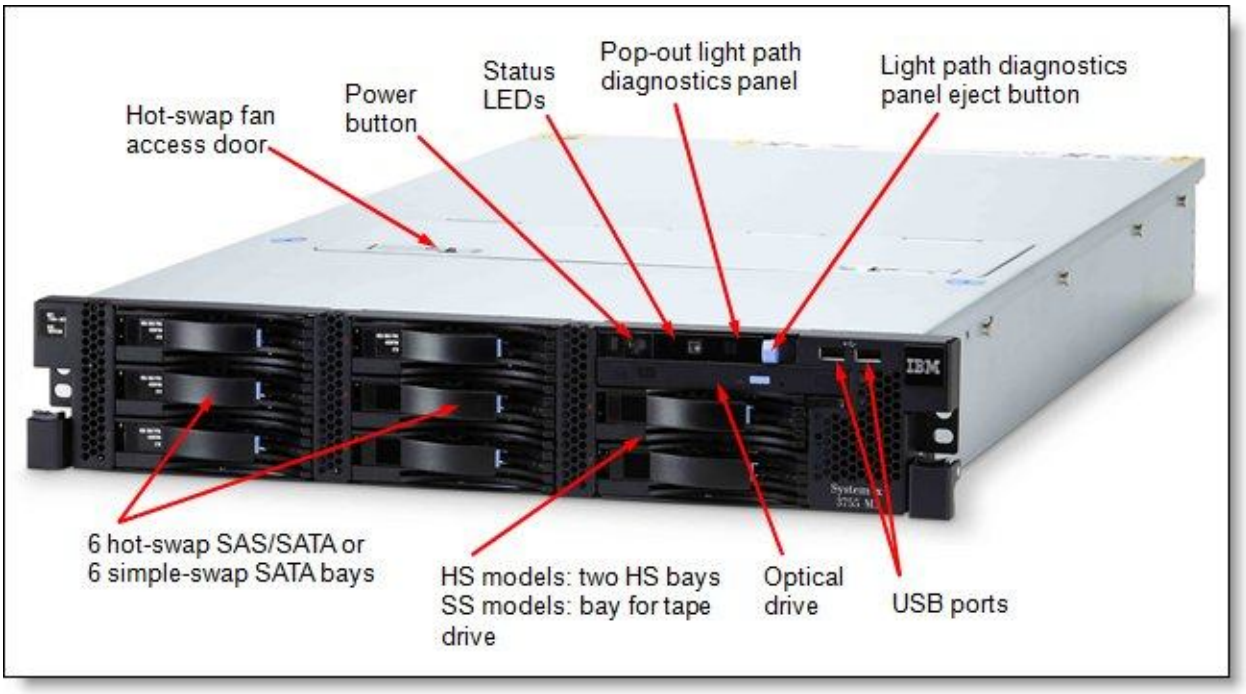

Figure 2. Front view of IBM System x3755 M3

Figure 3 shows the rear of the server.

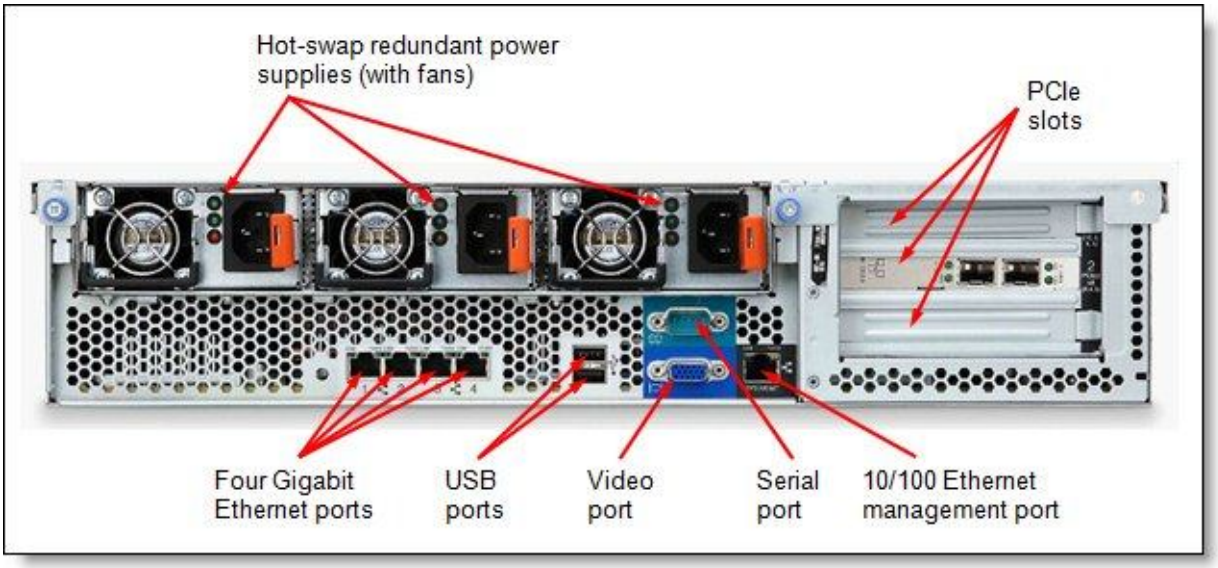

Figure 3. Rear view of IBM System x3755 M3

Figure 4 shows the locations of key components inside the server.

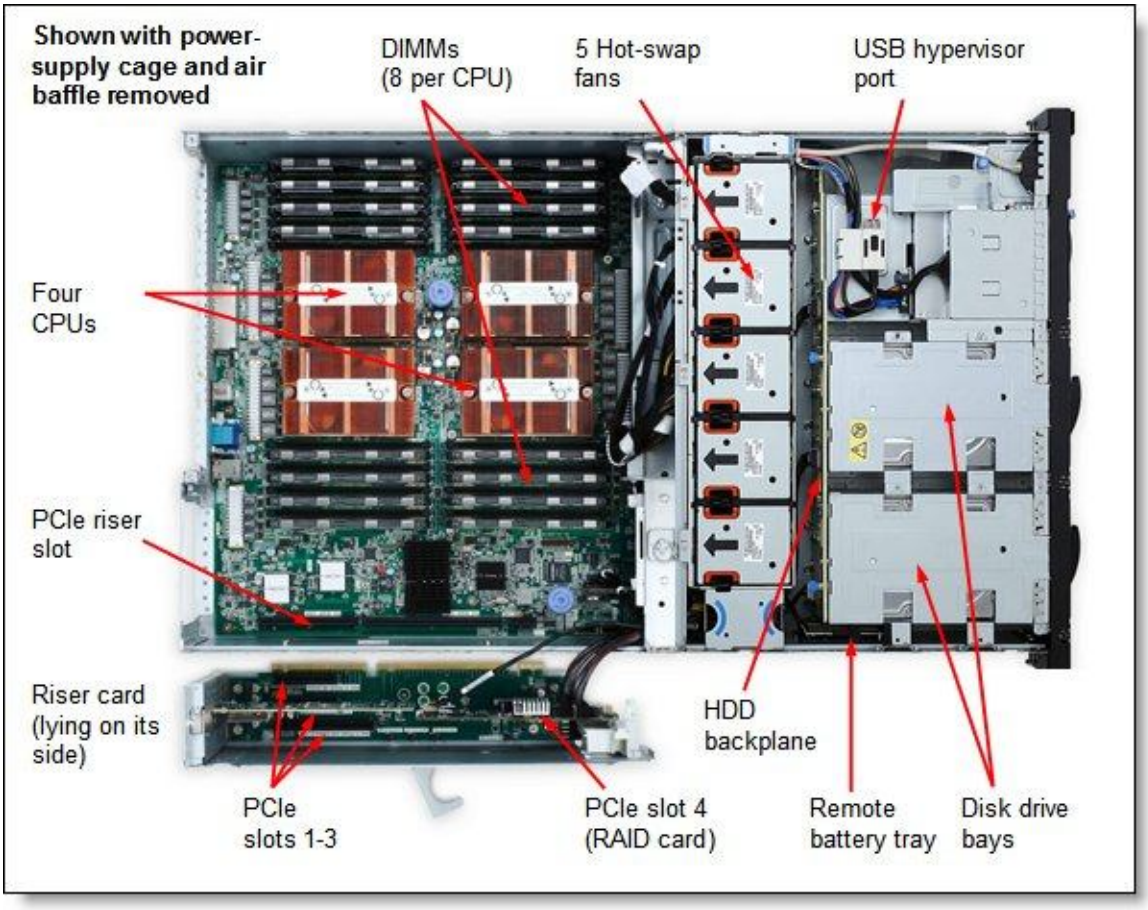

Figure 4. Inside view of IBM System x3755 M3 (shown with the power-supply cage and air baffle removed)

Standard specifications

The following table lists the standard specifications.

Table 1. Standard specifications (part 1)

Component	Specification
Form factor	2U rack.
Processor	Up to four AMD Opteron processors. **Models with AMD Opteron 6300 processors**: Either 16 cores (up to 2.8 GHz) or 12 cores (up to 2.8 GHz) or 8 cores (up to 3.2 GHz) or 4 cores (3.5 GHz), HyperTransport 3 technology up to 6.4 GT/s, and up to 1600 MHz memory speed. **Models with AMD Opteron 6200 processors**: Either 16 cores (up to 2.5 GHz) or 12 cores (up to 2.6 GHz) or 8 cores (up to 3.0 GHz), HyperTransport 3 technology up to 6.4 GT/s, and up to 1333 MHz memory speed.
Memory cache	Up to 16 MB L3.
Chipset	Models with AMD Opteron 6300 processors: AMD SB5790 and SP5100 Models with AMD Opteron 6200 processors: AMD SR5690 and SP5100.
Memory sockets	Up to 32 DIMM sockets (eight DIMMs per processor). Four memory channels per processor, up to 2 DIMMs per channel
Memory	Models with AMD Opteron 6300 processors: Supports RDIMMs only Models with AMD Opteron 6320 processors: Supports RDIMMs or UDIMMs. With RDIMMs: Up to 512 GB using 16 GB DDR3 RDIMMs and four processors With UDIMMs: Up to 128 GB with 4 GB DDR3 UDIMMs and four processors
Memory protection	ECC, Chipkill (for x4-based and x8-based memory DIMMs), and memory sparing.
Disk drive bays	Up to six 3.5" simple-swap (SS) SATA HDDs (CTO only), or up to eight 3.5" hot-swap (HS) SAS/SATA HDDs.
Maximum internal storage	Up to 32 TB with 4 TB 3.5" HS NL SATA or NL SAS HDDs Up to 4.8 TB with 600 GB 3.5" HS SAS HDDs Up to 18.0 TB with 3 TB 3.5" SS SATA HDDs (CTO only) Intermix of SAS/SATA is supported.
RAID support	RAID 0, 1, 5, 10, 50 with ServeRAID M5014 or M5015. RAID 0, 1, 1E with ServeRAID BR10ilv2 (CTO only) or ServeRAID M1015. Optional upgrade to RAID 6, 60 is available for M5014 and M5015. Optional upgrade to RAID 5 is available for M1015.
Optical drive bays	One with support for optional UltraSlim DVD-ROM or Multiburner.
Tape drive bays	None in standard models with hot-swap HDDs. One optional in CTO models with simple-swap HDDs.
Network interfaces	Four integrated Gigabit Ethernet ports (two dual-port Ethernet controllers). Broadcom BCM5709C chipset.
PCI Expansion slots	The server offers four PCI Express slots (one of them is reserved for the RAID controller): ● Slot 1: PCIe 2.0 x16, full height, full length ● Slot 2: PCIe 2.0 x8, low profile, half length ● Slot 3: PCIe 2.0 x8 (x4 wired), low profile, half length ● Slot 4: PCIe 2.0 x8, low profile, half length (internal only, reserved for RAID controller)

Table 1. Standard specifications (part 2)

Components	Specification
External ports	Two USB 2.0 on front. Two USB 2.0, one DB-15 video, one DB-9 serial, one RJ-45 systems management, four RJ-45 network ports on rear. One internal USB port for embedded hypervisor.
Cooling	Five hot swap fans with N+1 redundancy (standard models) or five non-hot swap non-redundant fans (only available via CTO).
Power supply	Up to three redundant hot-swap 1100 W AC power supplies with N+N or N+1 redundancy depending on the configuration.
Hot-swap components	Hard drives, power supplies, fans.
Systems management	UEFI, Integrated Baseboard Management Controller (iBMC) with standard remote presence (graphics, keyboard and mouse, virtual media), Predictive Failure Analysis, Light Path Diagnostics, Automatic Server Restart, IBM Systems Director versions 6.2.1 and 6.3, and IBM ServerGuide.
Security features	Power-on password, administrator's password, Trusted Platform Module (TPM).
Video	Aspeed AST2050 with 8 MB memory integrated into iBMC. Maximum resolution is 1280x1024 at 100 Hz with 64 K colors.
Operating systems supported	Microsoft Windows Server 2008 R2 and 2008, Red Hat Enterprise Linux 5 and 6, SUSE Linux Enterprise Server 10 and 11, VMware ESX 4.0 and 4.1, VMware ESXi 4.0 and 4.1 and vSphere 5 embedded hypervisor. See the Supported operating systems section for specifics.
Limited warranty	Three-year customer-replaceable unit and onsite limited warranty with 9x5/next-business-day response time.
Service and support	Optional service upgrades are available through IBM ServicePacs®: 4-hour or 2-hour response time, 8-hour fix time, 1-year or 2-year warranty extension, remote technical support for IBM hardware and selected IBM and third-party (Microsoft, Linux, VMware) software.
Dimensions	Width: 446 mm (17.6 in), depth: 728 mm (28.6 in), height: 87 mm (3.4 in)
Weight	Minimum configuration: 22 kg (48.6 lb), Maximum configuration: 33 kg (72.7 lb)

The x3755 M3 servers are shipped with the following items:

- Statement of Limited Warranty
- Important Notices
- Rack Installation Instructions
- Documentation CD that contains the *Installation and User's Guide*
- Environmental Notices CD
- IBM Systems Director 6.2 Base for x86 DVD-ROM
- Rail Kit
- Cable Management Arm (CMA)
- 2.8 m, 10A/100-250 V, C13 to IEC 320-C14 rack power cable (one for models with one power supply and two for models with two power supplies)

Standard models

The following table lists the standard models.

Table 2. Standard models

Model	AMD processor* (4 maximum)	Memory	RAID	Disk bays (std/max)	Disks	GbE	Optical	Power supply (std/max)
Models with AMD Opteron 6300 series processors								
7164-F3x	2x AMD Opteron 6380 16C 2.5 GHz 16MB 115W	4x 8 GB	M5015 +Battery	8x 3.5" HS / 8	Open	4x GbE	Optional	1x 1100W HS / 3
Models with AMD Opteron 6200 series processors								
7164-A2x	4x AMD Opteron 6282SE 16C 2.6 GHz 16 MB 140W	8x 4 GB	M5015 +Battery	8x 3.5" HS / 8	Open	4x GbE	Optional	2x 1100W HS / 3
7164-B2x	4x AMD Opteron 6276 16C 2.3 GHz 16 MB 115W	8x 4 GB	M5015 +Battery	8x 3.5" HS / 8	Open	4x GbE	Optional	1x 1100W HS / 3
7164-D2x	4x AMD Opteron 6272 16C 2.1 GHz 16 MB 115W	8x 4 GB	M1015	8x 3.5" HS / 8	Open	4x GbE	Optional	1x 1100W HS / 3
7164-G2x	4x AMD Opteron 6234 12C 2.4 GHz 16 MB 115W	8x 4 GB	M1015	8x 3.5" HS / 8	Open	4x GbE	Optional	1x 1100W HS / 3
7164-J2x	4x AMD Opteron 6220 8C 3.0 GHz 16 MB 115W	8x 4 GB	M1015	8x 3.5" HS / 8	Open	4x GbE	Optional	1x 1100W HS / 3
7164-L2x	4x AMD Opteron 6262HE 16C 1.6 GHz 16 MB 85W	8x 4 GB	M1015	8x 3.5" HS / 8	Open	4x GbE	Optional	1x 1100W HS / 3

* Processor detail: Quantity, model, number of cores, core speed, L3 cache, power rating

Refer to the Specifications section for information about standard features of the server.

Processor options

The server supports the processor options listed in the following table. The server supports up to four processors. The following table shows which server models have each processor standard. If there is no corresponding *where-used* model for a particular processor, then this processor is only available through CTO.

Table 3. Processor options

Part number	Feature codes*	Description†	Maximum mem speed	Models where used
AMD Opteron 6300 series processors				
00AM131	A4MW / A4N6	AMD Opteron 6308 4C 3.5 GHz 16MB 115W	1600 MHz	-
00AM130	A4MV / A4N5	AMD Opteron 6320 8C 2.8 GHz 16MB 115W	1600 MHz	-
00AM129	A4MU / A4N4	AMD Opteron 6328 8C 3.2 GHz 16MB 115W	1600 MHz	-
00AM128	A4MT / A4N3	AMD Opteron 6344 12C 2.6 GHz 16MB 115W	1600 MHz	-
00AM127	A4MS / A4N2	AMD Opteron 6348 12C 2.8 GHz 16MB 115W	1600 MHz	-
00AM132	A4MX / A4N7	AMD Opteron 6366HE 16C 1.8 GHz 16MB 85W	1600 MHz	-
00AM126	A4MR / A4N1	AMD Opteron 6376 16C 2.3 GHz 16MB 115W	1600 MHz	-
00AM125	A4MQ / A4N0	AMD Opteron 6378 16C 2.4 GHz 16MB 115W	1600 MHz	-
00AM123	A4MN / A4MY	AMD Opteron 6380 16C 2.5 GHz 16MB 115W	1600 MHz	F3x
00AM124	A4MP / A4MZ	AMD Opteron 6386SE 16C 2.8 GHz 16MB 140W	1600 MHz	-
AMD Opteron 6200 series processors				
90Y5355	A1T8 / A1TZ	AMD Opteron 6212 8C 2.6 GHz 16MB 115W	1333 MHz	-
90Y5358	A1TB / A1U2	AMD Opteron 6220 8C 3.0 GHz 16MB 115W	1333 MHz	J2x
90Y5357	A1TA / A1U1	AMD Opteron 6234 12C 2.4 GHz 16MB 115W	1333 MHz	G2x
90Y5356	A1T9 / A1U0	AMD Opteron 6238 12C 2.6 GHz 16MB 115W	1333 MHz	-
90Y5359	A1TC / A1U3	AMD Opteron 6262HE 16C 1.6 GHz 16MB 85W	1333 MHz	L2x
90Y5354	A1T7 / A1TY	AMD Opteron 6272 16C 2.1 GHz 16MB 115W	1333 MHz	D2x
90Y5353	A1T6 / A1TX	AMD Opteron 6274 16C 2.2 GHz 16MB 115W	1333 MHz	-
90Y5352	A1T5 / A1TW	AMD Opteron 6276 16C 2.3 GHz 16MB 115W	1333 MHz	B2x
90Y5351	A1T4 / A1TV	AMD Opteron 6282SE 16C 2.6 GHz 16MB 140W	1333 MHz	A2x

* The first feature code is for the first two processors; the second feature code is for the third and fourth processors
† Processor detail: Processor model, number of cores, core speed, L3 cache, and power consumption.

Memory options

IBM DDR3 memory is compatibility tested and tuned for optimal System x performance and throughput. IBM memory specifications are integrated into the light path diagnostics for immediate system performance feedback and optimum system uptime. From a service and support standpoint, IBM memory automatically assumes the IBM system warranty, and IBM provides service and support worldwide.

The following tables lists memory options available for the x3755 M3 server.

Table 4. Memory options for systems with AMD Opteron 6300 processors

Part number	Feature code	Description	Maximum supported	Models where used
RDIMMs				
46W0779	A4Z5	16GB (1x16GB, 2Rx4, 1.5V) PC3-14900 CL13 ECC DDR3 1866MHz LP RDIMM	32	-
46W0771	A4RC	8GB (1x8GB, 1Rx4, 1.35V) PC3L-12800 CL11 ECC DDR3 1600MHz LP RDIMM	32	F3x

Table 5. Memory options for systems with AMD Opteron 6200 processors

Part number	Feature code	Description	Maximum supported	Models where used
UDIMMs				
49Y1404	8648	4GB (1x4GB, 2Rx8, 1.35V) PC3L-10600 CL9 ECC DDR3 1333MHz LP UDIMM	32	-
RDIMMs				
49Y1400	8939	16GB (1x16GB, 4Rx4, 1.35V) PC3L-8500 CL7 ECC DDR3 1066MHz LP RDIMM	32	-
46C7449	8937	8GB (1x8GB, 2Rx4, 1.5V) PC3-10600 CL9 ECC DDR3 1333MHz LP RDIMM	32	-
49Y1435	8936	4GB (1x4GB, 2Rx4, 1.5V) PC3-10600 CL9 ECC DDR3 1333MHz LP RDIMM	32	22x, 32x, 42x, 52x, 62x, 72x
49Y1406	8941	4GB (1x4GB, 1Rx4, 1.35V) PC3L-10600 CL9 ECC DDR3 1333MHz LP RDIMM	32	J2x, G2x, L2x, D2x, B2x, A2x
49Y1405	8940	2GB (1x2GB, 1Rx8, 1.35V) PC3L-10600 CL9 ECC DDR3 1333MHz LP RDIMM	32	-

The IBM System x3755 M3 supports up to 16 DIMMs when two processors are installed and up to 32 DIMMs when four processors are installed. Each processor has four memory channels, and there are two DIMMs per channel.

The following rules apply when selecting the memory configuration:

- All configurations support RDIMMs
- Models with AMD Opteron 6200 processors also support UDIMMs
- Mixing different types of memory (UDIMMs and RDIMMs) is not supported.
- Mixing 1.5 V and 1.35 V DIMMs is supported, except in CTO configurations built in the factory. If 1.5 V and 1.35 V DIMMs are mixed, all DIMMs operate at 1.5 V

- Minimum of 2 DIMMs must be installed per processor
- The maximum quantity of DIMMs that can be installed in the server depends on the number of CPUs, DIMM type, rank, and operating voltage, as shown in the "Max. qty supported" row in the following table.
- All DIMMs in the server operate at the same speed, which is determined as the lowest value of:
  - Memory speed that is supported by the specific CPU.
  - Lowest of maximum operating speeds for selected memory configuration that depends on rated speed, operating voltage, and quantity of DIMMs per channel, as shown under "Maximum operating speed" section in the table.

The following two tables show the characteristics of the supported DIMMs. Table 6 is for models with AMD Opteron 6300 processors and Table 7 is for models with AMD Opteron 6200 processors. Tables cells highlighted with a gray background indicate when the combination of DIMM voltage and the number of DIMMs per channel still allows the DIMMs to operate at a rated speed.

The following memory protection technologies are supported:

- ECC
- ChipKill (for x4 and x8-based DIMMs)
- Memory sparing

Note: Memory Sparing is not supported with quad-rank DIMMs.

Table 6. Maximum memory speeds for systems with AMD Opteron 6300 processors

DIMM specification	**RDIMM**		
Rank	Single rank		Dual rank
Part numbers	46W0771 (8 GB)		46W0779 (16 GB)
Rated speed	1600 MHz		1866 MHz
Rated voltage	1.35 V		1.5 V
Operating voltage	1.35 V	1.5 V	1.5 V
Max qty supported*	32	32	32
Max DIMM capacity	8 GB	8 GB	16 GB
Max memory capacity	256 GB	256 GB	512 GB
Max. mem at rated speed	None	256 GB	None
Maximum operating speed			
1 DIMM per channel	1333 MHz	1600 MHz	1600 MHz
2 DIMMs per channel	1333 MHz	1600 MHz	1600 MHz

* The maximum quantity that is supported is shown for four processors installed.

Table 7. Maximum memory speeds for systems with AMD Opteron 6200 processors

DIMM specification	**UDIMM**		**RDIMM**				
Rank	Dual rank		Single rank		Dual rank	Quad rank	
Part numbers	49Y1404 (4 GB)		49Y1406 (4 GB) 49Y1405 (2 GB)		46C7449 (8 GB) 49Y1435 (4 GB)	49Y1400 (16 GB)	
Rated speed	1333 MHz		1333 MHz		1333 MHz	1066 MHz	
Rated voltage	1.35 V		1.35 V		1.5 V	1.35 V	
Operating voltage	1.35 V	1.5 V	1.35 V	1.5 V	1.5 V	1.35 V	1.5 V
Max qty supported*	32	32	32	32	32	32	32
Max DIMM capacity	4 GB	4 GB	4 GB	4 GB	8 GB	16 GB	16 GB
Max memory capacity	128 GB	128 GB	128 GB	128 GB	256 GB	512 GB	512 GB
Max. mem at rated speed	128 GB	128 GB	128 GB	128 GB	256 GB	256 GB	512 GB
Maximum operating speed							
1 DIMM per channel	1333 MHz	1333 MHz	1333 MHz	1333 MHz	1333 MHz	1066 MHz	1066 MHz
2 DIMMs per channel	1333 MHz	1333 MHz	1333 MHz	1333 MHz	1333 MHz	800 MHz	1066 MHz

* The maximum quantity that is supported is shown for four processors installed.

Internal storage

IBM System x3755 M3 server supports the following internal storage configurations:

- Six 3.5" Simple-Swap SATA drive bays (only available via CTO)
- Eight 3.5" Hot-Swap drive bays supporting SAS or SATA drives

Controllers for internal storage

The following table lists the RAID controllers and additional options used for internal disk storage of the x3755 M3 server.

Table 8. RAID controllers for internal storage

Part number	Description	Max quantity supported	Standard models where used
46M0831	ServeRAID M1015 SAS/SATA Controller	1	22x, 32x,42x, 62x, J2x, G2x, L2x, D2x
46M0832	ServeRAID M1000 Series Advance Feature Key	1	-
46M0916	ServeRAID M5014 SAS/SATA Controller	1	-
46M0829	ServeRAID M5015 SAS/SATA Controller	1	52x, 72x, B2x, A2x, F3x
46M0917	ServeRAID M5000 Series Battery Kit	1	52x, 72x, B2x, A2x
46M0930	ServeRAID M5000 Series Advance Feature Key	1	-
68Y7396	ServeRAID M5000 Series Battery Remote Mount Cable	1	-
49Y4731	ServeRAID-BR10il SAS/SATA Controller v2	1	-

The RAID controller is installed into dedicated PCI-E slot 4 (Figure 4). Simple Swap SATA models only support the ServeRAID BR10il v2 controller. The BR10il v2 supports up to four SS SATA HDDs, and the remaining two SATA HDDs can be used as standalone drives that are not part of a RAID array. Hot swap SAS/SATA models do not support ServeRAID BR10il v2.

If the ServeRAID M5014 or M5014 controller is specified with a battery, it can be used in the x3755 M3. However, the battery is installed separately on a remote battery tray and connected to the RAID controller via the ServeRAID M5000 Series Battery Remote Mount Cable, 68Y7396. Installing the battery remotely is done to avoid overheating. The remote battery tray is shipped standard with the server and is attached to the side of the chassis.

The ServeRAID BR10il v2 SAS/SATA Controller has the following specifications:

- One Mini-SAS internal connector
- Supports RAID levels 0, 1, and 1E
- 3 Gbps throughput per port
- Based on the LSI 1064E controller
- PCI Express 2.0 x4 host interface
- Stripe size: 64 KB (fixed)

The ServeRAID M1015 SAS/SATA Controller has the following specifications:

- Two Mini-SAS internal connectors
- Supports RAID levels 0, 1, and 10
- Supports RAID levels 5 and 50 with optional ServeRAID M1000 Series Advanced Feature Key
- 6 Gbps throughput per port
- Based on the LSI SAS2008 6 Gbps RAID on Chip (ROC) controller
- PCI Express 2.0 x8 host interface
- Configurable stripe size up to 64 KB

The ServeRAID M5014 SAS/SATA Controller has the following specifications:

- Two Mini-SAS internal connectors
- Supports RAID levels 0, 1, 5, 10, and 50
- Supports RAID 6 and 60 with the optional M5000 Advanced Feature Key
- 6 Gbps throughput per port
- PCI Express 2.0 x8 host interface
- Based on the LSI SAS2108 6 Gbps ROC controller
- 256 MB of onboard cache
- Optional Intelligent Li-Ion-based battery backup unit with the ServeRAID M5000 Series Battery Kit

The ServeRAID M5015 SAS/SATA Controller has the following specifications:

- Two Mini-SAS internal connectors
- Supports RAID levels 0, 1, 5, 10, and 50
- Supports RAID 6 and 60 with the optional M5000 Advanced Feature Key
- 6 Gbps throughput per port
- PCI Express 2.0 x8 host interface
- Based on the LSI SAS2108 6 Gbps ROC controller
- 512 MB of onboard cache
- Standard Intelligent Li-Ion-based battery backup unit with up to 48 hours of data retention

For more information, see the list of IBM Redbooks® Product Guides in the RAID adapters category:
http://www.redbooks.ibm.com/portals/systemx?Open&page=pg&cat=raid

Internal drive options

The following table lists hard drive options for internal disk storage of the x3755 M3 server.

Table 9. Disk drive options for internal disk storage

Part number	Feature code	Description	Maximum supported
Hot-swap SAS drives			
44W2244	5313	IBM 600GB 15K 6Gbps SAS 3.5" Hot-Swap HDD	8
44W2239	5312	IBM 450GB 15K 6Gbps SAS 3.5" Hot-Swap HDD	8
44W2234	5311	IBM 300GB 15K 6Gbps SAS 3.5" Hot-Swap HDD	8
Hot-swap NL SAS drives			
49Y6205	A4AG	IBM 4TB 7.2K 6Gbps NL SAS 3.5" HS HDD	8
81Y9758	A281	IBM 3TB 7.2K 6Gbps NL SAS 3.5" HS HDD	8
42D0767	5417	IBM 2TB 7.2K 6Gbps NL SAS 3.5" HS HDD	8
42D0777	5418	IBM 1TB 7.2K 6Gbps NL SAS 3.5" HS HDD	8
Hot-swap NL SATA drives			
49Y6185	A3WB	IBM 4TB 7.2K 6Gbps NL SATA 3.5" HS HDD	8
81Y9774	A27Z	IBM 3TB 7.2K 6Gbps NL SATA 3.5" HS HDD	8
42D0782	5415	IBM 2TB 7200 NL SATA 3.5" HS HDD	8
Hot-swap SATA drives			
43W7626	5560	IBM 1TB 7200 SATA 3.5" HS HDD	8
39M4530	5196	500GB 7200 RPM 3.5" Hot-Swap SATA II	8
Simple swap drives			
81Y9778	A280	IBM 3TB 7.2K 6Gbps NL SATA 3.5" SS HDD	6
42D0787	5416	IBM 2TB 7200 NL SATA 3.5" SS HDD	6
43W7622	5559	IBM 1TB 7.2K SATA 3.5" Simple-Swap HDD	6
39M4514	5288	500GB 7200 RPM 3.5" Simple-Swap SATA II	6

Internal backup units

The x3755 M3 server with simple-swap drives can physically house an internal tape drive. However, the supported tape drive has been withdrawn from marketing. As a result the x3755 M3 cannot be configured with an internal tape drive.

Optical drives

The server supports the optical drive options listed in the following table.

Table 10. Optical drives

Part number	Feature code	Description	Maximum supported	Standard models where used
46M0901	4161	IBM UltraSlim Enhanced SATA DVD-ROM	1	-
46M0902	4163	IBM UltraSlim Enhanced SATA Multi-Burner	1	-

IBM UltraSlim Enhanced SATA DVD-ROM (part number 46M0901) supports the following media and speeds for reading:

- CD-ROM 24X
- CD-DA (DAE) 20X
- CD-R 24X
- CD-RW 24X
- DVD-ROM (single layer) 8X
- DVD-ROM (dual layer) 8X
- DVD-R (4.7 GB) 6X
- DVD-R DL 4X
- DVD+R 6X
- DVD+R DL 4X
- DVD-RW (4.7 GB) 4X
- DVD+RW 4X
- DVD-RAM (4.7/9.4 GB) 4X

IBM UltraSlim Enhanced SATA Multi-Burner (part number 46M0902) supports the same media and speeds for reading as DVD-ROM (46M0901). In addition, this drive supports the following media and speeds for writing:

- CD-R 24X
- CD-RW 4X
- High Speed CD-RW 10X
- Ultra Speed CD-RW 16X
- Ultra Speed Plus CD-RW 16X
- DVD-R 8X
- DVD-R DL 6X
- DVD+R 8X
- DVD+R DL 6X
- DVD-RW 6X
- DVD+RW 8X
- DVD-RAM 5X

I/O expansion options

The server offers four PCI Express slots (one of them is reserved for the RAID controller) that are located on a riser card. The slot form factors are:

- Slot 1: PCIe 2.0 x16, full height, full length
- Slot 2: PCIe 2.0 x8, low profile, half length
- Slot 3: PCIe 2.0 x8 (x4 wired), low profile, half length
- Slot 4: PCIe 2.0 x8, low profile, half length (internal only, reserved for RAID controller)

Figure 6 shows the location of the adapter slots on a riser card.

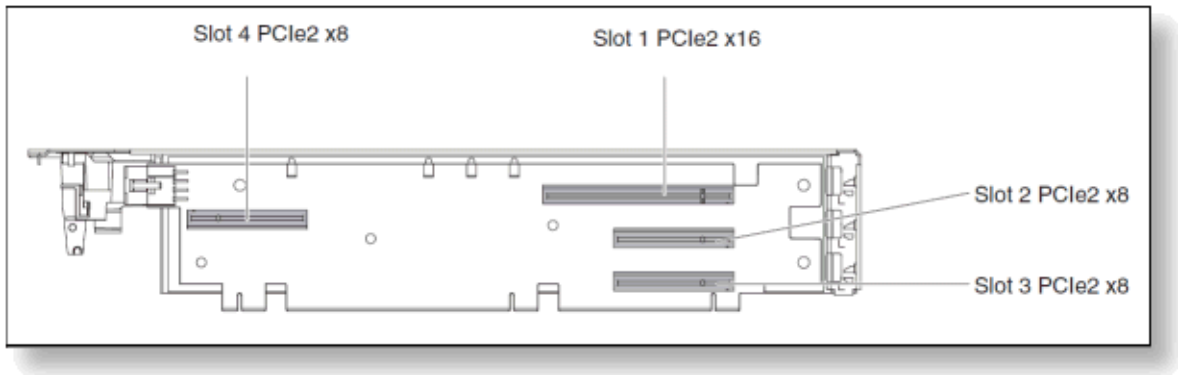

Figure 6. Adapter slots in the x3755 M3

Network adapters

The x3755 M3 supports two integrated dual-port Gigabit Ethernet controllers for a total of four onboard LAN ports.

Integrated NICs have the following features:

- Broadcom BCM5709C chip
- TCP Offload Engine (TOE) support
- Wake on LAN support
- 802.1Q VLAN tagging support
- NIC Teaming (load balancing and failover)

The following table lists additional supported network adapters.

Table 11. Network adapters

Part number	Feature code	Description	Maximum supported
40 Gb Ethernet adapters			
00D9550	A3PN	Mellanox ConnectX-3 FDR VPI IB/E Adapter for IBM System x	3
10 Gb Ethernet adapters			
49Y7910	A18Y	Broadcom NetXtreme II Dual Port 10GBaseT Adapter for IBM System x	3
42C1820	1637	Brocade 10Gb CNA for IBM System x	3
49Y7960	A2EC	Intel X520 Dual Port 10GbE SFP+ Adapter for IBM System x	3
81Y9990	A1M4	Mellanox ConnectX-2 Dual Port 10GbE Adapter for IBM System x	3
00D9690	A3PM	Mellanox ConnectX-3 10 GbE Adapter for IBM System x	3
42C1800	5751	QLogic 10Gb CNA for IBM System x	
1 Gb Ethernet adapters			
90Y9370	A2V4	Broadcom NetXtreme I Dual Port GbE Adapter for IBM System x	3
90Y9352	A2V3	Broadcom NetXtreme I Quad Port GbE Adapter for IBM System x	3
49Y4230	5767	Intel Ethernet Dual Port Server Adapter I340-T2 for IBM System x	3
39Y6066	1485	NetXtreme II 1000 Express Single Port Ethernet Adapter	3
42C1780	2995	NetXtreme II 1000 Express Dual Port Ethernet Adapter	3
49Y4220	5766	NetXtreme II 1000 Express Quad Port Ethernet Adapter	3
42C1750	2975	PRO/1000 PF Server Adapter	3
39Y6126	2944	PRO/1000 PT Dual Port Server Adapter by Intel	3
InfiniBand adapters			
95Y3750	A2MY	Mellanox ConnectX-2 Dual-port QSFP QDR IB Adapter for IBM System x	1
00D9550	A3PN	Mellanox ConnectX-3 FDR VPI IB/E Adapter for IBM System x	3

Storage host bus adapters

The following table lists storage HBAs supported by the x3755 M3 server.

Table 12. Storage adapters

Part number	Feature code	Description	Maximum supported
Fibre Channel - 16 Gb			
81Y1655	A2W5	Emulex 16Gb FC Single-port HBA for IBM System x	3
81Y1662	A2W6	Emulex 16Gb FC Dual-port HBA for IBM System x	3
81Y1668	A2XU	Brocade 16Gb FC Single-port HBA for IBM System x	3
81Y1675	A2XV	Brocade 16Gb FC Dual-port HBA for IBM System x	3
00Y3337	A3KW	QLogic 16Gb FC Single-port HBA for IBM System x	3
00Y3341	A3KX	QLogic 16Gb FC Dual-port HBA for IBM System x	3
Fibre Channel - 8 Gb			
46M6049	3589	Brocade 8Gb FC Single-port HBA for IBM System x	3
46M6050	3591	Brocade 8Gb FC Dual-port HBA for IBM System x	3
42D0485	3580	Emulex 8Gb FC Single-port HBA for IBM System x	3
42D0494	3581	Emulex 8Gb FC Dual-port HBA for IBM System x	3
42D0501	3578	QLogic 8Gb FC Single-port HBA for IBM System x	3
42D0510	3579	QLogic 8Gb FC Dual-port HBA for IBM System x	3
SAS			
46M0907	5982	IBM 6Gb SAS HBA	3

PCIe SSD adapters

The server does not support high IOPS SSD adapters.

Power supplies

The server supports up to three 1100-watt, hot-swap power supplies that support N+N or N+1 redundancy depending on the configuration:

- If only two or three processors are installed or four processors less than 140 W are installed, then one power supply is required and the second supply can be redundant if installed (N+N where N=1)
- If four 140W processors are installed, then two power supplies are required for a fully-populated server with no redundancy (or three power supplies can be installed with the third redundant N+1, where N=2)
- If four 140W processors are installed, only one power supply can be installed with no redundancy (or two power supplies can be installed with the second redundant, N+1 where N=1) provided these limits are met:
  - Maximum 16 DIMMs
  - Maxumum 4 disk drives

The server comes standard with one or two power supplies, depending on the model. The following table lists the power supplies.

Table 13. Power supplies

Part number	Feature code	Description	Maximum supported	Standard models where used
49Y7342	2593	1100W Redundant Power Supply	3	All

Each power supply ships standard with one 2.8 m, 10A/100-250 V, C13 to IEC 320-C14 Rack Power Cable.

Integrated virtualization

The server supports VMware ESXi installed on a USB memory key. The key is installed in a USB socket inside the server. The following tables lists the virtualization options.

Table 14. Virtualization options for systems with AMD Opteron 6300 processors

Part number	Feature code	Description	Maximum supported
41Y8298	A2G0	IBM Blank USB Memory Key for VMware ESXi Downloads	1
41Y8311	A2R3	IBM USB Memory Key for VMware ESXi 5.1	1

Table 15. Virtualization options for systems with AMD Opteron 6200 processors

Part number	Feature code	Description	Maximum supported
41Y8298	A2G0	IBM Blank USB Memory Key for VMWware ESXi Downloads	1
41Y8311	A2R3	IBM USB Memory Key for VMware ESXi 5.1	1
41Y8307	A383	IBM USB Memory Key for VMware ESXi 5.0 Update 1	1
41Y8300	A2VC	IBM USB Memory Key for VMware ESXi 5.0	1
41Y8296	A1NP	IBM USB Memory Key for VMware ESXi 4.1 Update 1	1
41Y8287	3033	IBM USB Memory Key for VMware ESXi 4.1	1
41Y8278	1776	IBM USB Memory Key for VMware ESXi 4	1

Remote management

The server contains second-generation Integrated Baseboard Management Controller (iBMC), which provides advanced service-processor control, monitoring, and an alerting function. If an environmental condition exceeds a threshold or if a system component fails, the iBMC lights LEDs to help you diagnose the problem, records the error in the event log, and alerts you to the problem. In addition, the iBMC also provides a virtual presence as a standard feature for remote server management capabilities.

The iBMC provides remote server management through industry-standard interfaces:

- Intelligent Platform Management Interface (IPMI) Version 2.0
- Simple Network Management Protocol (SNMP) Version 3
- Web browser

The remote management feature provides the following functions:

- Remotely viewing video with graphics resolutions up to 1600 x 1200 at 75 Hz, regardless of the system state
- Remotely accessing the server using the keyboard and mouse from a remote client
- Mapping the CD or DVD drive, diskette drive, and USB flash drive on a remote client, and mapping ISO and diskette image files as virtual drives that are available for use by the server
- Uploading a diskette image to the iBMC memory and mapping it to the server as a virtual drive

The blue-screen capture feature captures the video display contents before the iBMC restarts the server when the iBMC detects an operating system hang condition. A system administrator can use the blue-screen capture feature to assist in determining the cause of the hang condition.

Supported operating systems

The following operating systems are supported on models with AMD Opteron 6300 processors:

- Microsoft Windows Server 2008 R2
- Microsoft Windows Server 2008, Datacenter x64 Edition
- Microsoft Windows Server 2008, Enterprise x64 Edition
- Microsoft Windows Server 2008, Standard x64 Edition
- Microsoft Windows Server 2008, Web x64 Edition
- Red Hat Enterprise Linux 5 Server x64 Edition
- Red Hat Enterprise Linux 6 Server x64 Edition
- SUSE LINUX Enterprise Server 11 for AMD64/EM64T
- SUSE LINUX Enterprise Server 11 with Xen for AMD64/EM64T
- VMware vSphere 5.1 (ESXi)
- VMware vSphere 5.5 (ESXi)

The following operating systems are supported on models with AMD Opteron 6200 processors:

- Microsoft Windows Server 2008 R2
- Microsoft Windows Server 2008, Datacenter x64 Edition
- Microsoft Windows Server 2008, Enterprise x64 Edition
- Microsoft Windows Server 2008, Standard x64 Edition
- Microsoft Windows Server 2008, Web x64 Edition
- Red Hat Enterprise Linux 5 Server with Xen x64 Edition
- Red Hat Enterprise Linux 5 Server x64 Edition
- Red Hat Enterprise Linux 6 Server x64 Edition
- SUSE LINUX Enterprise Server 10 for AMD64/EM64T
- SUSE LINUX Enterprise Server 11 for AMD64/EM64T
- SUSE LINUX Enterprise Server 11 with Xen for AMD64/EM64T
- VMware ESX 4.0
- VMware ESX 4.1
- VMware ESXi 4.0
- VMware ESXi 4.1
- VMware vSphere 5.0 (ESXi)
- VMware vSphere 5.1 (ESXi)
- VMware vSphere 5.5 (ESXi)

See the IBM ServerProven® website for the latest information about the specific versions and service levels supported and any other prerequisites:
http://www.ibm.com/systems/info/x86servers/serverproven/compat/us/nos/matrix.shtml

Physical and electrical specifications

Dimensions and weight:

- Width: 446.0 mm (17.6 in)
- Depth: 727.5 mm (28.6 in)
- Height: 87.0 mm (3.4 in)
- Weight:
  - 22 kg (48.6 lb) (minimum configuration)
  - 33 kg (72.7 lb) (maximum configuration)

Supported environment:

- Air temperature
  - Server on: 10 - 35 °C (50 - 95 °F); altitude: 0 - 915 m (3,000 ft)
  - Server on: 10 - 32 °C (50 - 90 °F); altitude: 915 m (3,000 ft) - 2,134 m (7,000 ft)
  - Server off: 10 - 43 °C (50 - 109 °F)
- Humidity
  - Server on: 8 - 80%
  - Server off: 8 - 80%
- Electrical
  - 100 - 127 (nominal) V ac; 50 Hz or 60 Hz; 19.0 A
  - 200 - 240 (nominal) V ac; 50 Hz or 60 Hz; 11.6 A
  - Input kilovolt-amperes (kVA) (approximately):
    - Minimum configuration: 0.20 kVA
    - Maximum configuration: 2.17 kVA
- Btu output
  - Ship configuration: 648 Btu/hr (190 watts)
  - Full configuration: 6739 Btu/hr (2150 watts)
- Acoustical noise emission levels
  - 6.8 bels (idling)
  - 6.8 bels (operating)

Warranty options

The IBM System x3755 M3 has a 3-year onsite warranty with 9x5/next-business-day terms. IBM offers the warranty service upgrades through IBM ServicePacs, discussed in this section. The IBM ServicePac is a series of prepackaged warranty maintenance upgrades and post-warranty maintenance agreements with a well-defined scope of services, including service hours, response time, term of service, and service agreement terms and conditions.

IBM ServicePac offerings are country-specific, that is, each country might have its own service types, service levels, response times, and terms and conditions. Not all covered types of ServicePacs might be available in a particular country. For more information about IBM ServicePac offerings available in your country, visit the IBM ServicePac Product Selector at:
https://www-304.ibm.com/sales/gss/download/spst/servicepac.

The following table explains warranty service definitions in more detail.

Table 16. Warranty service definitions

Term	Description
IBM onsite repair (IOR)	A service technician will come to the server's location for equipment repair.
24x7x2 hour	A service technician is scheduled to arrive at your customer's location within two hours after remote problem determination is completed. We provide service around the clock, every day, including IBM holidays.
24x7x4 hour	A service technician is scheduled to arrive at your customer's location within four hours after remote problem determination is completed. We provide service around the clock, every day, including IBM holidays.
9x5x4 hour	A service technician is scheduled to arrive at your customer's location within four business hours after remote problem determination is completed. We provide service from 8:00 a.m. to 5:00 p.m. in the customer's local time zone, Monday through Friday, excluding IBM holidays. If after 1:00 p.m. it is determined that onsite service is required, the customer can expect the service technician to arrive the morning of the following business day. For noncritical service requests, a service technician will arrive by the end of the following business day.
9x5 next business day	A service technician is scheduled to arrive at your customer's location on the business day after we receive your call, following remote problem determination. We provide service from 8:00 a.m. to 5:00 p.m. in the customer's local time zone, Monday through Friday, excluding IBM holidays.

In general, the types of IBM ServicePacs are:

- Warranty and maintenance service upgrades
  - One, 2, 3, 4, or 5 years of 9x5 or 24x7 service coverage
  - Onsite repair from next business day to 4 or 2 hours
  - One or 2 years of warranty extension
- Remote technical support services
  - One or three years with 24x7 coverage (severity 1) or 9x5/next business day for all severities
  - Installation and startup support for System x servers
  - Remote technical support for System x servers
  - Software support - Support Line
    - Microsoft or Linux software
    - VMware
    - IBM Systems Director

Regulatory compliance

The server conforms to the following international standards:

- FCC - Verified to comply with Part 15 of the FCC Rules, Class A
- Canada ICES-003, issue 4, Class A
- UL/IEC 60950-1
- CSA C22.2 No. 69950-1-03
- NOM-019
- Argentina IEC60950-1
- Japan VCCI, Class A
- Australia/New Zealand AS/NZS CISPR 22, Class A
- IEC-60950-1:2001 (CB Certificate and CB Test Report)
- Taiwan BSMI CNS 13438, Class A; CNS 14336
- China CCC (GB4943), GB9254 Class A, GB17625.1
- Korea KN22, Class A; KN24
- Russia/GOST ME01, IEC-60950-1, GOST R 51318.22-99, GOST R 51318.24-99, GOST R 51317.3.2-2006, GOST R 51317.3.3-99
- IEC 60950-1 (CB Certificate and CB Test Report)
- CE Mark (EN55022 Class A, EN60950-1, EN55024, EN61000-3-2, EN61000-3-3)
- CISPR 22, Class A
- TUV-GS (EN60950-1 /IEC60950-1,EK1-ITB2000)

External disk storage expansion

External disk storage expansion (JBOD) is not supported.

External disk storage systems

The following table lists the external storage systems that are supported by the server and can be ordered through System x sales channel. The server may support other IBM disk systems that are not listed in this table. Refer to IBM System Storage Interoperability Center for further information, http://www.ibm.com/systems/support/storage/ssic.

Table 17. External disk storage systems

Part number	Description
1746A2D	IBM System Storage DS3512 Express Dual Controller Storage System
1746A2S	IBM System Storage DS3512 Express Single Controller Storage System
1746A4D	IBM System Storage DS3524 Express Dual Controller Storage System
1746A4S	IBM System Storage DS3524 Express Single Controller Storage System
181494H	IBM System Storage DS3950 Model 94
181498H	IBM System Storage DS3950 Model 98
181492H	IBM System Storage EXP395 Expansion Unit
1746A2E	IBM System Storage EXP3512 Express Storage™ Expansion Unit
1746A4E	IBM System Storage EXP3524 Express Storage Expansion Unit

For more information, see the list of IBM Redbooks Product Guides in the Storage Systems category: http://www.redbooks.ibm.com/portals/systemx?Open&page=pg&cat=externalstorage

External backup units

The server supports the external backup attachment options listed in the following table.

Table 18. External backup options (Part 1)

Part number	Description
External tape expansion enclosures for internal tape drives	
87651UX	1U Tape Drive Enclosure
8767HHX	Half High Tape Drive Enclosure
87651NX	1U Tape Drive Enclosure (with Nema 5-15P LineCord)
8767HNX	Half High Tape Drive Enclosure (with Nema 5-15P LineCord)
Tape enclosure adapters (with cables)	
44E8869	USB Enclosure Adapter Kit
40K2599	SAS Enclosure Adapter Kit
Internal backup drives supported by external tape enclosures	
46C5364	IBM RDX Removable Hard Disk Storage System - Internal USB 160 GB Bundle
46C5387	IBM RDX Removable Hard Disk Storage System - Internal USB 320 GB Bundle
46C5388	IBM RDX Removable Hard Disk Storage System - Internal USB 500 GB Bundle
46C5399	IBM DDS Generation 5 USB Tape Drive
39M5636	IBM DDS Generation 6 USB Tape Drive
43W8478	IBM Half High LTO Gen 3 SAS Tape Drive
44E8895	IBM Half High LTO Gen 4 SAS Tape Drive
49Y9898	IBM Half High LTO Gen 5 Internal SAS Tape Drive

Table 18. External backup options (Part 2)

Part number	Description
External backup units*	
362516X	IBM RDX Removable Hard Disk Storage System - External USB 160 GB Bundle
362532X	IBM RDX Removable Hard Disk Storage System - External USB 320 GB Bundle
362550X	IBM RDX Removable Hard Disk Storage System - External USB 500 GB Bundle
3628L3X	IBM Half High LTO Gen 3 External SAS Tape Drive (with US line cord)
3628L4X	IBM Half High LTO Gen 4 External SAS Tape Drive (with US line cord)
3628L5X	IBM Half High LTO Gen 5 External SAS Tape Drive (with US line cord)
3628N3X	IBM Half High LTO Gen 3 External SAS Tape Drive (without line cord)
3628N4X	IBM Half High LTO Gen 4 External SAS Tape Drive (without line cord)
3628N5X	IBM Half High LTO Gen 5 External SAS Tape Drive (without line cord)
3580S3V	System Storage TS2230 Tape Drive Express Model H3V
3580S4V	System Storage TS2240 Tape Drive Express Model H4V
3580S5E	System Storage TS2250 Tape Drive Express Model H5S
3580S5X	System Storage TS2350 Tape Drive Express Model S53
3572S4R	TS2900 Tape Library with LTO4 HH SAS drive & rack mount kit
3572S5R	TS2900 Tape Library with LTO5 HH SAS drive & rack mount kit
35732UL	TS3100 Tape Library Model L2U Driveless
35734UL	TS3200 Tape Library Model L4U Driveless
46X2682†	LTO Ultrium 5 Fibre Channel Drive
46X2683†	LTO Ultrium 5 SAS Drive Sled
46X2684†	LTO Ultrium 5 Half High Fibre Drive Sled
46X2685†	LTO Ultrium 5 Half High SAS Drive Sled
46X6912†	LTO Ultrium 4 Half High Fibre Channel Drive Sled
46X7117†	LTO Ultrium 4 Half High SAS DriveV2 Sled
46X7122†	LTO Ultrium 3 Half High SAS DriveV2 Sled

* Note: The external tape drives listed can be ordered through System x sales channel. Server may support other IBM tape drives that are not listed in this table. Refer to IBM System Storage Interoperability Center for further information.
† Note: These part numbers are the tape drives options for 35732UL and 35734UL.

For more information, see the list of IBM Redbooks Product Guides in the Backup units category:
http://www.redbooks.ibm.com/portals/systemx?Open&page=pg&cat=tape

Top-of-rack Ethernet switches

The server supports the top-of-rack Ethernet switches from IBM System Networking listed in the following table.

Table 19. IBM System Networking - Top-of-rack switches

Part number	Description
IBM System Networking - 1 Gb top-of-rack switches	
0446013	IBM System Networking RackSwitch G8000R
7309CFC	IBM System Networking RackSwitch G8000F
7309CD8	IBM System Networking RackSwitch G8000DC
7309G52	IBM System Networking RackSwitch G8052R
730952F	IBM System Networking RackSwitch G8052F
427348E	IBM Ethernet Switch J48E
6630010	Juniper Networks EX2200 24 Port
6630011	Juniper Networks EX2200 24 Port with PoE
6630012	Juniper Networks EX2200 48 Port
6630013	Juniper Networks EX2200 48 Port with PoE
IBM System Networking - 10 Gb top-of-rack switches	
7309DRX	IBM System Networking RackSwitch G8264CS (Rear to Front)
7309DFX	IBM System Networking RackSwitch G8264CS (Front to Rear)
7309BD5	IBM System Networking RackSwitch G8124DC
7309BR6	IBM System Networking RackSwitch G8124ER
7309BF7	IBM System Networking RackSwitch G8124EF
7309G64	IBM System Networking RackSwitch G8264R
730964F	IBM System Networking RackSwitch G8264F
7309CR9	IBM System Networking RackSwitch G8264TR
7309CF9	IBM System Networking RackSwitch G8264TF
0719410	Juniper Networks EX4500 - Front to Back Airflow
0719420	Juniper Networks EX4500 - Back to Front Airflow
IBM System Networking - 40 Gb top-of-rack switches	
8036ARX	IBM System Networking RackSwitch G8316R
8036AFX	IBM System Networking RackSwitch G8316F

For more information, see the list of IBM Redbooks Product Guides in the Top-of-rack switches category: http://www.redbooks.ibm.com/portals/systemx?Open&page=pg&cat=tor

Uninterruptible power supply units

The server supports attachments to the uninterruptible power supply (UPS) units listed in the following table.

Table 20. Uninterruptible power supply units

Part number	Description
Rack-mounted UPS	
21304RX	IBM UPS 10000XHV
53951AX	IBM 1500VA LCD 2U Rack UPS (100V/120V)
53951KX	IBM 1500VA LCD 2U Rack UPS (230V)
53952AX	IBM 2200VA LCD 2U Rack UPS (100V/120V)
53952KX	IBM 2200VA LCD 2U Rack UPS (230V)
53953AX	IBM 3000VA LCD 3U Rack UPS (100 V/120 V)
53953JX	IBM 3000VA LCD 3U Rack UPS (200 V/208 V)
53956AX	IBM 6000VA LCD 4U Rack UPS (200 V/208 V)
53956KX	IBM 6000VA LCD 4U Rack UPS (230 V)

For more information, see the list of IBM Redbooks Product Guides in the Power infrastructure category: http://www.redbooks.ibm.com/portals/systemx?Open&page=pg&cat=power

Power distribution units

The server supports attachments to the power distribution units (PDUs) listed in the following table.

Table 21. Power distribution units (part 1)

Part number	Description
Switched and Monitored PDUs	
46M4002	IBM 1U 9 C19/3 C13 Active Energy Manager DPI® PDU
46M4003	IBM 1U 9 C19/3 C13 Active Energy Manager 60A 3 Phase PDU
46M4004	IBM 1U 12 C13 Active Energy Manager DPI PDU
46M4005	IBM 1U 12 C13 Active Energy Manager 60A 3 Phase PDU
46M4167	IBM 1U 9 C19/3 C13 Switched and Monitored 30A 3 Phase PDU
46M4116	IBM 0U 24 C13 Switched and Monitored 30A PDU
46M4119	IBM 0U 24 C13 Switched and Monitored 32A PDU
46M4134	IBM 0U 12 C19/12 C13 Switched and Monitored 50A 3 Phase PDU
46M4137	IBM 0U 12 C19/12 C13 Switched and Monitored 32A 3 Phase PDU
Enterprise PDUs	
71762MX	IBM Ultra Density Enterprise PDU C19 PDU+ (WW)
71762NX	IBM Ultra Density Enterprise PDU C19 PDU (WW)
71763MU	IBM Ultra Density Enterprise PDU C19 3 phase 60A PDU+ (NA)
71763NU	IBM Ultra Density Enterprise PDU C19 3 phase 60A PDU (NA)
39M2816	IBM DPI C13 Enterprise PDU without linecord
39Y8923	DPI 60A Three Phase C19 Enterprise PDU with IEC309 3P+G (208 V) fixed line cord
39Y8941	DPI Single Phase C13 Enterprise PDU without line cord
39Y8948	DPI Single Phase C19 Enterprise PDU without line cord
Front-End PDUs	
39Y8934	DPI 32amp/250V Front-end PDU with IEC 309 2P+Gnd connector
39Y8935	DPI 63amp/250V Front-end PDU with IEC 309 2P+Gnd connector
39Y8938	30amp/125V Front-end PDU with NEMA L5-30P connector
39Y8939	30amp/250V Front-end PDU with NEMA L6-30P connector
39Y8940	60amp/250V Front-end PDU with IEC 309 60A 2P+N+Gnd connector

Table 21. Power distribution units (part 2)

Part number	Description
Universal PDUs	
39Y8951	DPI Universal Rack PDU w/ US LV and HV line cords
39Y8952	DPI Universal Rack PDU w/ CEE7-VII Europe LC
39Y8953	DPI Universal Rack PDU w/ Denmark LC
39Y8954	DPI Universal Rack PDU w/ Israel LC
39Y8955	DPI Universal Rack PDU w/Italy LC
39Y8956	DPI Universal Rack PDU w/South Africa LC
39Y8957	DPI Universal Rack PDU w/UK LC
39Y8958	DPI Universal Rack PDU with AS/NZ LC
39Y8959	DPI Universal Rack PDU w/China LC
39Y8962	DPI Universal Rack PDU (Argentina)
39Y8960	DPI Universal Rack PDU (Brazil)
39Y8961	DPI Universal Rack PDU (India)
0U Basic PDUs	
46M4122	IBM 0U 24 C13 16A 3 Phase PDU
46M4125	IBM 0U 24 C13 30A 3 Phase PDU
46M4128	IBM 0U 24 C13 30A PDU
46M4131	IBM 0U 24 C13 32A PDU
46M4140	IBM 0U 12 C19/12 C13 60A 3 Phase PDU
46M4143	IBM 0U 12 C19/12 C13 32A 3 Phase PDU

For more information, see the list of IBM Redbooks Product Guides in the Power infrastructure category: http://www.redbooks.ibm.com/portals/systemx?Open&page=pg&cat=power

Rack cabinets

The server supports the rack cabinets listed in the following table.

Table 22. Rack cabinets

Part number	Description
201886X	IBM 11U Office Enablement Kit
93084EX	IBM 42U Enterprise Expansion Rack
93084PX	IBM 42U Enterprise Rack
93604EX	IBM 42U 1200 mm Deep Dynamic Expansion Rack
93604PX	IBM 42U 1200 mm Deep Dynamic Rack
93614EX	IBM 42U 1200 mm Deep Static Expansion Rack
93614PX	IBM 42U 1200 mm Deep Static Rack
93624EX	IBM 47U 1200 mm Deep Static Expansion Rack
93624PX	IBM 47U 1200 mm Deep Static Rack
14104RX	IBM Linux Cluster Rack

For more information, see the list of IBM Redbooks Product Guides in the Rack cabinets and options category:
http://www.redbooks.ibm.com/portals/systemx?Open&page=pg&cat=rack

Rack options

The server supports the rack console switches and monitor kits listed in the following table.

Table 23. Rack options

Part number	Feature code	Description
Monitor kits and keyboard trays		
17238BX	1723HC1 fc A3EK	IBM 1U 18.5" Standard Console
17238EX	1723HC1 fc A3EL	IBM 1U 18.5" Enhanced Media Console
172317X	1723HC1 fc 0051	1U 17in Flat Panel Console Kit
172319X	1723HC1 fc 0052	1U 19in Flat Panel Console Kit
Console switches		
1754D2X	1754HC2 fc 6695	IBM Global 4x2x32 Console Manager (GCM32)
1754D1X	1754HC1 fc 6694	IBM Global 2x2x16 Console Manager (GCM16)
1754A2X	1754HC4 fc 0726	IBM Local 2x16 Console Manager (LCM16)
1754A1X	1754HC3 fc 0725	IBM Local 1x8 Console Manager (LCM8)
Console cables		
43V6147	3757	IBM Single Cable USB Conversion Option (UCO)
39M2895	3756	IBM USB Conversion Option (4 Pack UCO)
39M2897	3754	IBM Long KVM Conversion Option (4 Pack Long KCO)
46M5383	5341	IBM Virtual Media Conversion Option Gen2 (VCO2)
46M5382	5340	IBM Serial Conversion Option (SCO)

For more information, see the list of IBM Redbooks Product Guides in the Rack cabinets and options category:
http://www.redbooks.ibm.com/portals/systemx?Open&page=pg&cat=rack

IBM Global Financing

IBM Global Financing can help you obtain the IT solution you need while preserving funding for other strategic investments and optimizing cash flow. Our Fair Market Value (FMV) lease helps ensure that you have the latest IBM technology and with our mid-lease upgrade capability, you can increase the capacity of the system with little to no change in monthly payments. At the end of the lease, take advantage of our flexible end-of-lease options to fit your changing business needs. IBM Global Financing has the breadth and depth of offerings, longevity, proven success and global reach to help you develop a robust financing and asset management strategy that provides you the opportunity to leverage new technologies and turn your ambitious vision into a tangible solution.

Here are some other reasons why working with us makes solid financial sense:

- Expand your purchasing power–Affordable monthly payments allow you to change the technology acquisition discussion from “what can I afford right now” to “what solution is really right for my business.” IBM Global Financing allows you to expand your purchase power to get you the right solution.
- Accelerate your project’s cash flow break-even point–Acquire your IBM technology today and begin to realize its benefits now. An FMV lease can help you get the solution you need now, with low monthly payments that better align upfront costs with the anticipated return on investment from the technology.
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Related publications and links

For more information see the following resources:

- IBM System x3755 M3 product page
  http://ibm.com/systems/x/hardware/rack/x3755m3
- *IBM System x 3755 M3 Installation and User's Guide*
  http://ibm.com/support/entry/portal/docdisplay?lndocid=MIGR-5085682
- *IBM System x 3755 M3 Problem Determination and Service Guide*
  http://ibm.com/support/entry/portal/docdisplay?lndocid=MIGR-5085681
- ServerProven hardware compatibility page for the x3755 M3
  http://ibm.com/systems/info/x86servers/serverproven/compat/us/xseries/7164.html
- At-a-glance guides for IBM System x servers and options
  http://www.redbooks.ibm.com/Redbooks.nsf/portals/systemx?Open&page=pgbycat
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